What is claimed is:

1.   A method of applying a blur to an image, the method comprising the steps of:

defining a primary kernel to compute an output pixel as a weighted average of a plurality of pixels of the image wherein a spatial relationship between the output pixel and the plurality of pixels is determined by a step size of the primary kernel;

applying the primary kernel to each pixel of the image to produce an intermediate result;

increasing the step size of the primary kernel to create a higher order primary kernel and applying the higher order primary kernel to the intermediate result to produce a result image.

2.   The method of claim 1 further comprising the steps of:

defining a secondary kernel to compute an output pixel as a weighted average of a plurality of pixels of the image wherein a spatial relationship between the output pixel and the plurality of pixels is determined by a step size of the secondary kernel and wherein the weighted average of the secondary kernel is different from the weighted average of the primary kernel;

applying the secondary kernel to each pixel of the result image to produce a second intermediate result.

3.   The method of claim 2 further comprising:

determining a final result by interpolating between the result image and the second intermediate result.

4.   The method of claim 2 further comprising:

applying the secondary kernel to each pixel of the second intermediate result to produce a third intermediate result; and

determining a final result by interpolating between the second intermediate result and the third intermediate result.

5.   The method of claim 1 wherein the step size is further increased to create a successively higher order primary kernel and the successively higher order primary kernel is applied to a previous intermediate result to produce a next intermediate result until a predetermined step size limit is reached.

6.   The method of any of claims 1–5 wherein the blur is a Gaussian blur computed by performing each step in a horizontal direction and in a vertical direction.

7.   The method of any of claims 1–5 wherein the blur is a blur selected from the group consisting of: a motion blur, a zoom blur, a radial blur, and a spatially dependent blur.

8.   The method of any of claims 1–5 wherein the steps are performed by a plurality of GPU fragment programs.

9.   The method of any of claims 1–5 wherein the step size is computed proportional to a regular factor raised to a power determined by a current kernel application step number.

10.   The method of claim 9 wherein the step size is horizontal in even subpasses and vertical in odd subpasses.

11.   A machine readable medium having embodied thereupon instructions executable by a machine to perform the following method steps:

defining a primary kernel to compute an output pixel as a weighted average of a plurality of pixels of the image wherein a spatial relationship between the output pixel and the plurality of pixels is determined by a step size of the primary kernel;

applying the primary kernel to each pixel of the image to produce an intermediate result;

increasing the step size of the primary kernel to create a higher order primary kernel and applying the higher order primary kernel to the intermediate result to produce a result image.

12.   The machine readable medium of claim 11, wherein the method steps executable by the machine further comprise:

defining a secondary kernel to compute an output pixel as a weighted average of a plurality of pixels of the image wherein a spatial relationship between the output pixel and the plurality of pixels is determined by a step size of the secondary kernel and wherein the weighted average of the secondary kernel is different from the weighted average of the primary kernel;

applying the secondary kernel to each pixel of the result image to produce a second intermediate result.

13.   The machine readable medium of claim 12, wherein the method steps executable by the machine further comprise:

determining a final result by interpolating between the result image and the second intermediate result.

14. The machine readable medium of claim 11, wherein the method steps executable by the machine further comprise:

> applying the secondary kernel to each pixel of the second intermediate result to produce a third intermediate result; and
>
> determining a final result by interpolating between the second intermediate result and the third intermediate result.

15. The machine readable medium of any of claims 11–14 wherein the step size is computed proportional to a regular factor raised to a power determined by a current kernel application step number.

16. The method of claim 15 wherein the step size is horizontal in even subpasses and vertical in odd subpasses.